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Volunteer for IOWATER in 2003

Mahdi Al-Kaisi

Iowa State University, malkaisi@iastate.edu

H. Mark Hanna

Iowa State University, hmhanna@iastate.edu

Lynette Seigley

Iowa Department of Natural Resources, lynette.seigley@dnr.iowa.gov

Michael J. Tidman

Iowa State University

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Abstract

Water quality is an important issue for agriculture. The protection of Iowa's rivers, streams, and lakes from nonpoint source pollution is one of the greatest environmental challenges facing our state. Despite the accomplishments of Iowa producers over the past few years (buffer strips, grassed waterways, no-till, and similar efforts), some water bodies have fallen short of water quality standards.

Keywords

Agronomy, Agricultural and Biosystems Engineering

Disciplines

Agricultural Science | Agriculture | Agronomy and Crop Sciences | Bioresource and Agricultural Engineering
| Hydrology

INTEGRATED CROP MANAGEMENT

A photograph of a person in a field, possibly a farmer or researcher, with large, stylized text overlaid. The text reads 'INTEGRATED CROP MANAGEMENT'. The background shows a field with tall grasses and a person in the distance.

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Water quality is an important issue for agriculture. The protection of Iowa's rivers, streams, and lakes from nonpoint source pollution is one of the greatest environmental challenges facing our state. Despite the accomplishments of Iowa producers over the past few years (buffer strips, grassed waterways, no-till, and similar efforts), some water bodies have fallen short of water quality standards.

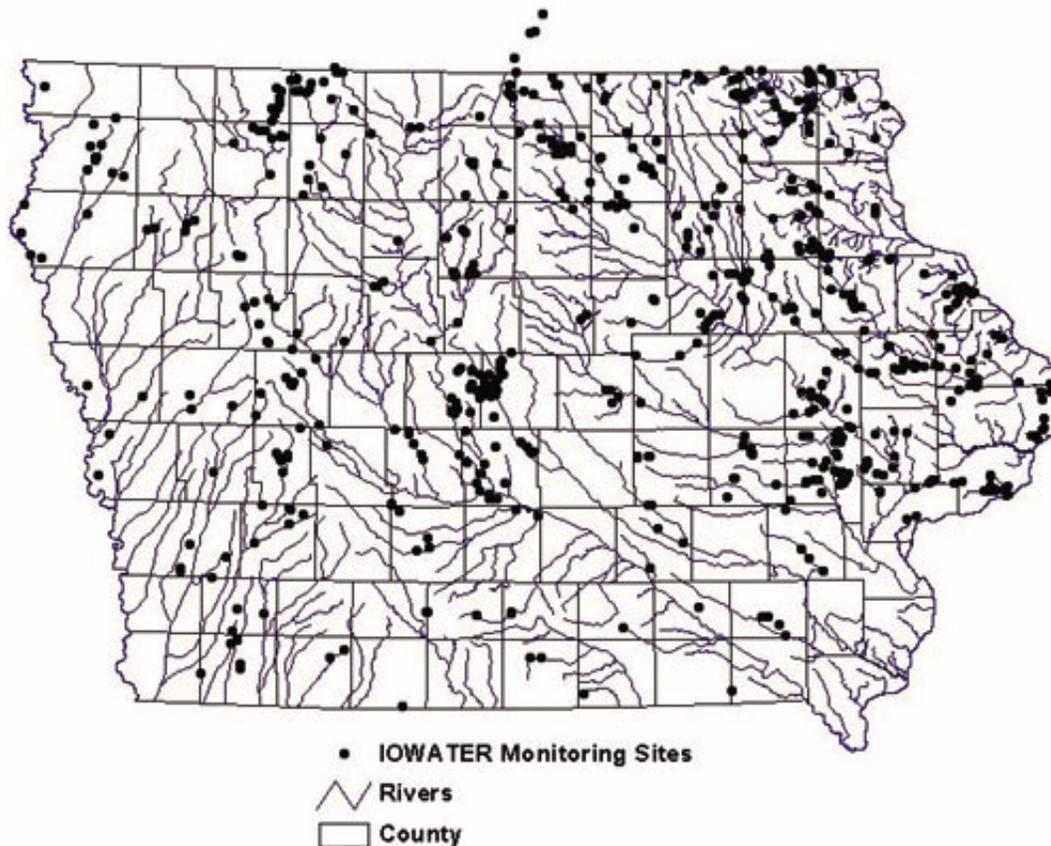
Gathering meaningful baseline data about water quality may reveal sources, timing, and extent of pollution in surface waters. The role of long-term data gathering and monitoring (under rigorous scientific standards) is critical in understanding and reversing current environmental trends. A pioneering, volunteer-based water quality monitoring program called IOWATER is helping set that baseline.

IOWATER and water quality monitoring

IOWATER began May 1998 as a cooperative effort among state and federal agencies and nongovernment organizations in Iowa. Using an extensive network of trained volunteers, IOWATER seeks to establish baseline water quality information and track long-term water quality trends in Iowa's surface waters. Using this information, citizens of Iowa, private organizations, and public agencies can work together to protect and improve Iowa's water resources. Teachers and students use IOWATER as a classroom activity. Many people in urban areas are curious about the water quality of their urban streams, as well as those who are interested in fishing. Currently, about 1,300 volunteers have been trained statewide, with about 1,000 sites registered for monitoring across the state. Roughly 75 percent of registered sites have now submitted water quality data.

IOWATER data sources

Because of many variables, water quality can be difficult to monitor. The findings are showing that, especially in smaller streams, water quality can vary tremendously. The season, climate, and rainfall can skew a single measurement.



Approximately 1,000 sites in Iowa are registered for water quality monitoring as part of the IOWATER program; 75 percent of registered sites have already submitted water quality data.

Single samples can only provide a snapshot; thus, there is a need for a commitment to long-term monitoring. Over time, a complete set of data can begin to show what is normal for a stream. By participating and collecting data in your area, you can take an active role in collecting baseline data on streams where no data exists.

There is also a tremendous opportunity for private landowners and producers who are interested in monitoring streams on their property to get involved. Many producers may be interested in monitoring tile lines to determine what is coming off farm fields through tile lines, or from livestock facilities.

Once you collect data, reporting the data is voluntary. Whatever data you collect is yours--you do not have to share it. But IOWATER encourages sharing information, because more data allows for a more accurate assessment of water quality statewide.

Take this opportunity to get involved. Iowa will have to adopt nutrient standards in the future, and agriculture will probably be affected. IOWATER monitoring will be an important part of pulling together data for any new standards and in making the determination whether it is possible to meet those standards.

"Our county Farm Bureau and the state Farm Bureau both pitched in to sponsor an IOWATER workshop here in Sac County. We had about 30 participants, half of whom were farmers with most of the other half teachers and students. We thought teachers and students from our area schools were a good resource for us, and offered to help find sites for them to monitor water quality in Sac County through IOWATER. For us, it also was a great experience in awareness and learning more about the criteria involved in measuring water quality."



Volunteers help gather baseline data from surface waters for the IOWATER monitoring program.

Remember the principles of IOWATER are to focus on solutions and results not regulation. The program is flexible, allowing local people to design their own monitoring plans, identify where to monitor, and determine the frequency of monitoring. So why not make a New Year's resolution right now? Take another step in your conservation plan by volunteering for the IOWATER water quality monitoring effort.

For more information on IOWATER, contact the Iowa Department of Natural Resources at (515) 281-4476.

IOWATER Mission

To protect and improve Iowa's water quality by establishing and supporting a statewide volunteer water monitoring program.

IOWATER Goals

- Expand citizen volunteer water monitoring.
- Provide a balanced approach for citizens to become involved in protecting and improving water resources.
- Develop opportunities for citizens to experience and discover the influence of watersheds on water quality.
- Develop a user-friendly process for data collection and interpretation to increase accurate information on the state's water resources.

Standard IOWATER Level 1 testing

- Biological--counting the bottom-dwelling (benthic) invertebrates in a stream. Because invertebrates are sensitive to pollution, their numbers can indicate a great deal about the level and kind of pollution in a stream.
- Physical--watershed analysis, habitat assessment, turbidity, water temperature, and stream flow.
- Chemical--dissolved oxygen, pH, nitrate, and phosphate.

In the future, testing could seek levels of many other aquatic properties, including ammonia, alkalinity, coliforms, biological oxygen demand, chloride, total suspended solids, and total dissolved solids.

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